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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,330	12/30/2003	Thomas J. Good	10455-1US	4637

7590
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04/27/2007

EXAMINER

KIM, SUN U

ART UNIT

PAPER NUMBER

1723

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10088330	12/30/03	GOOD ET AL.	10455-1US

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EXAMINER

John Kim

ART UNIT	PAPER
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1723

20070424

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

In view of the papers filed 4/24/06 and 3/19/07, it has been found that this nonprovisional application, as filed, through error and without deceptive intent, improperly set forth the inventorship, and accordingly, this application has been corrected in compliance with 37 CFR 1.48(a). The inventorship of this application has been changed by addition of Bruce W. Redmond.

The application will be forwarded to the Office of Initial Patent Examination (OIPE) for issuance of a corrected filing receipt, and correction of Office records to reflect the inventorship as corrected.

John Kim
Primary Examiner
Art Unit: 1723

Office Action Summary	Application No.		Applicant(s)	
	10/088,330		GOOD ET AL.	
	Examiner		Art Unit	
	John Kim		1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 11-17, 19, 21-25 and 27-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-17, 19 and 22-24 is/are allowed.
- 6) ☒ Claim(s) 1-8, 11, 21, 25, 27, 29-34 and 39-41 is/are rejected.
- 7) ☒ Claim(s) 19, 28 and 35-38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet</u> . |

Continuation of Attachment(s) 6). Other: PTO-90C Decision on Correction of Inventorship.

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/18/07 has been entered.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-8, 11, 21, 25 and 41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. New recitation of “a sidewall, a bottom wall mechanically attached to the sidewall” in claim 1 is a new matter. Original disclosure including figures appears to only show at best an unitary bottom wall and sidewall and does not show or describe “a bottom wall mechanically attached to the sidewall”.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-5, 11, 21, 25 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pieper et al (US Pat. No. 5,391,298) in view of Mehl (US Pat. No. 4,774,058) and Markell et al (US Pat. No. 5,279,742). Pieper et al teach an apparatus for extracting a substance from a liquid sample comprising a container(18) having an entrance (25, 50), an exit (32, 36), a sidewall (20), a bottom wall (22) mechanically attached to the sidewall (20) and a passage therebetween wherein the exit (36) is substantially centrally located in the bottom wall (22) of the container (18) being substantially perpendicular to a flow path between the entrance (25, 50) and the exit (32, 36), within the passage, a thin layer of microparticulate extraction media (40) of silica wherein the extraction media layer (40) has a top surface, a bottom surface and a peripheral edge in contact with the sidewall, the extraction media has a particle size of 0.1 to about 600 microns (see col. 4, lines 57-60), a thin layer of microparticulate extraction media disk (40) having a diameter of 47 mm and a thickness of 0.5 mm (see col. 6, lines 23-25) which meets the claimed ratio of the diameter of the extraction media layer to the thickness of the extraction media layer being at least 10 and the extraction media disk (40) being sandwiched between two cylindrical porous sheets (42, 44) i.e. compression layers and a lower mesh flow distributor (38) below the

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lower porous sheet (44) (see figures 2-3; col. 4, line 7 – col. 6, line 27; col. 7, line 51 – col. 8, line 24; col. 1, lines 10-28). Claims 1-5, 11, 21, 25 and 41 essentially differ from apparatus of Piper et al in reciting that the bottom wall of the container having a flat internal surface, the compression layers being formed of a flexible, hydrophilic microfiber material and the extraction media has a particle size of less than 20 microns. Piper et al shows a container having a conical bottom wall in figures 2-3. Such conical bottom wall inherently enhances the fluid flow out to the exit by sheer downwardly inclined wall toward the exit. Piper et al teach that a restriction of fluid flow through the housing allow a liquid layer to build up in the housing which completely immerses the extraction medium (see col. 2, lines 43-59). Changing the configuration of the bottom wall of the container from a conical shape to a flat surface would have been obvious to a person of ordinary skill in the art to effectively restricting the fluid flow in the container to build up liquid layer in the housing to immerse the extraction medium as suggested by Piper et al.

Mehl teaches a filter for separating fluid samples comprising a container (12), a thin extraction media of particles (42) made of silica which are retained by upper and lower compression layers (36, 38) made of glass fibers which inherently have a pore size less than the particle of the extraction media to retain particles (see figures 1-7; col. 2, lines 9-16; col. 3, lines 37-47; col. 4, line 61 – col. 5, line 55). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the porous sheets of Piper et al with compression layers made of glass fibers i.e. flexible, hydrophilic microfiber materials for retaining extraction media layer as suggested by Mehl (see col. 5, lines 43-55). Markell et al teach an extraction media disk comprising particles having a size less than 20 microns (see col. 8, line 27 – col. 10, line 11). Incorporating particles having a size less than 20 microns in the extraction media of Piper et al

would have been obvious at the time the invention was made since such particles are known to be used for extraction process as taught in Markell et al.

6. Claims 27, 29-33 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pieper et al (US Pat. No. 5,391,298). Pieper et al teach method and an apparatus for extracting a substance from a liquid sample comprising a container having a top (20) with an inlet (25, 50) and a bottom (22) having a centrally located outlet (32, 36) and a substantially flat inner wall and the container (20, 22) having a thin layer of microparticulate extraction media disk (40) having a diameter of 47 mm and a thickness of 0.5 mm which meets the claimed ratio of the diameter of the extraction media layer to the thickness of the extraction media layer being at least 10 and the extraction media disk (40) being sandwiched between two cylindrical porous sheets (42, 44) i.e. compression layers and a lower mesh flow distributor (38) below the lower porous sheet (44) wherein a liquid sample is passed through the container into the entrance (28) for transverse flow through the extraction media (40) and out the exit (32, 36) to extract analyte from the liquid sample by the extraction media (see figures (see figures 2-3; col. 4, line 7 – col. 6, line 27; col. 7, line 51 – col. 8, line 24; col. 1, lines 10-28). Claims 27, 29-33 and 39-40 essentially differ from method and apparatus of Piper et al in reciting that the bottom wall of the container having a flat internal surface. Piper et al shows a container having a conical bottom wall in figures 2-3. Such conical bottom wall inherently enhances the fluid flow out to the exit by sheer downwardly inclined wall toward the exit. Piper et al teach that a restriction of fluid flow through the housing allow a liquid layer to build up in the housing which completely immerses the extraction medium (see col. 2, lines 43-59). Changing the configuration of the bottom wall of the container from a conical shape to a flat surface would have been obvious to a

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person of ordinary skill in the art to effectively restricting the fluid flow in the container to build up liquid layer in the housing to immerse the extraction medium as suggested by Piper et al.

7. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pieper et al as applied to claim 27 above and further in view of Markell et al. Pieper et al teach an apparatus for extracting a substance from a liquid sample as described in above paragraph. Markell et al teach an extraction media disk comprising particles having a size less than 20 microns (see col. 8, line 27 – col. 10, line 11). Incorporating particles having a size less than 20 microns in the extraction media of Piper et al would have been obvious at the time the invention was made since such particles are known to be used for extraction process as taught in Markell et al.

8. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pieper et al.

Pieper et al teach a particulate material having a size in the range of 0.1 to about 600 micrometers, preferably in the range of 1 to 100 micrometers (see col. 4, lines 55-60).

Pieper et al disclose the claimed invention except for a extraction media having a particle size of less than 20 microns. It would have been obvious to one having ordinary skill in the art at the time the invention was made to discover optimal particle size of less than 20 microns since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

9. Claims 12-17, 19 and 22-24 are allowed.

10. Claims 28 and 35-38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


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11. Applicant's arguments with respect to claims 1-8, 11-17, 19, 21-25 and 27-41 have been considered but are moot in view of the new ground(s) of rejection.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kim whose telephone number is 571-272-1142. The examiner can normally be reached on Monday-Friday 7 a.m. - 3:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John Kim
Primary Examiner
Art Unit 1723

JK
4/24/07